

Work Order ID 69243

Page 1

Thursday, May 05, 2011 11:51:07 AM

Item ID: D412-742-043

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Float Skidtube

Start Date: 5/5/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 5/9/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan: HDate: 11-05-0

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D3391

Rev H

100

0.00



DC

DOCUMENT CONTROL

Memo

0.00

Document Control

If D412-742-043 is a W/O on it's own,
Photocopy bluefile and create labels per PPP D412-742-043 CHG004N/A HJ

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

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Page 2

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Start Date: 5/5/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 5/9/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

110

0.00



HandFinishing

HandFinish

Memo

0.00

Hand Finishing

1-Install tubes together and seal them all the way around using Sikaflex 241/291. Ensure tube ends line-up with saddle holes for proper alignment. using 7/16" "T" Pins.
A/R ☐ Sikaflex-241/-291 ☐ 11116945
Expiry date: ☐ 12/01

2-Install wearplates as per Dwg D3391. Ensure that plastic washers are against wearplate, then topped with the SS washer. Seal all bolts with sikaflex except ones with inserts on inside of tube, hand tighten only bolts with no sikaflex.

A/R ☐ Sikaflex-241/-291 ☐ 11116945
Expiry date: ☐ 12/01

3-Remove "T" pins once sikaflex is dry.

4-Coat all exposed hardware with LPS Procyon. Remove any excess off with MEK degreaser.
A/R ☐ LPS Procyon ☐ 11116596

1 0 24 1104108

Pro →

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
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| | | | | | | | |
| | | | | | | | |

Part No: D42-42-043 PAR #: W/A Fault Category: Design NCR: Yes ☒ No ☐ DQA: A Date: 11.06.20
 Resolution: Accept use as is Disposition: use as is QA: N/C Closed: _____ Date: _____

| NCR: <u>69243</u> | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|-------------------|------|---|--|--|-----------------------|---|---|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| 11.06.08 | 110 | Aft saddle holes won't allow installation of bolts. R.C. Process | <u>GP</u> 11.06.08 <u>DS/10/12</u> | Acceptable to file inner holes to allow bolts to install | <u>GP</u> 11/06/08 | <u>GP</u> 11.06.08 <u>DS/1042</u> | <u>GP</u> 11.06.08 <u>DS/1042</u> | <u>GP</u> 11/06/20 |
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NOTE: Date & initial all entries

Work Order ID 69243

Thursday, May 05, 2011 11:51:07 AM



Page 3

Item ID: D412-742-043

Accept



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Revision ID:

Stop



Item Name: Replacement Float Skidtube

Start Date: 5/5/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 5/9/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

8 u/b6108



Quality Control

130

Packaging

0.00



Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D412-742-043

Location:

PPP Rev:

PP 68640

Rup/16

140

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/6/16

MF
11-06-16

| W/O: | | WORK ORDER CHANGES | | | | | |
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NOTE: Date & initial all entries

Picklist Print

Thursday, May 05, 2011 11:51:14 AM

Page 1

Work Order ID: 69243

Parent Item: D412-742-043

Parent Item Name: Replacement Float Skidtube



Start Date: 5/5/2011

Required Date: 5/9/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev A 05.10.13 New Issue KJ/JLM
 IPP Rev B 06.02.13 ECN 773 dwg @ rev.D EC
 IPP Rev:C 07-05-28 As per Rev F JLM
 IPP Rev:D 07-12-04 ECN 1072 DD verified by:JLM
 IPP Rev:E 08-09-08 ecn 08-510 DD verified by:EC

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|--|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|-----------------|-------------|--------------|---------------|----------------|--------|
| AN3C4A  BOLT | | Purchased | No | | | 110 | Each | 1,984.000 | 24 | 24 | | | |
| | | | | <u>Location</u> | | <u>Loc Qty</u> | | <u>Loc Code</u> | | | | | |
| | | | | ST350 | | 1984 | | | | | | | |
| | | | | 117094 | | 984 | | | | | | | |
| | | | | 117313 | | 1000 | | M117094 | | x24 | | | |
| AN3C6A  BOLT | | Purchased | No | | | 110 | Each | 350.0000 | 12 | 12 | | | |
| | | | | <u>Location</u> | | <u>Loc Qty</u> | | <u>Loc Code</u> | | | | | |
| | | | | FP-A | | 1 | | | | | | | |
| | | | | 111982 | | 1 | | | | | | | |
| | | | | ST351 | | 349 | | | | | | | |
| | | | | 111982 | | 2 | | | | | | | |
| | | | | 116419 | | 47 | | | | | | | |
| | | | | 116549 | | 50 | | | | x12 | | | |
| | | | | 116704 | | 100 | | | | | | | |
| | | | | 117514 | | 100 | | | | | | | |
| | | | | 117619 | | 50 | | | | | | | |

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NOTE: Date & initial all entries

Picklist Print

Thursday, May 05, 2011 11:51:14 AM

Work Order ID: 69243

Parent Item: D412-742-043

Parent Item Name: Replacement Float Skidtube

Start Date: 5/5/2011

Required Date: 5/9/2011

Start Qty: 1.00

Required Qty: 1.00

AN3C7A Purchased No 110 Each 189.0000 8 8



BOLT



u u l o w l o g

Location

Loc Qty

Loc Code

ST351

139

113149

14

116169

25

117313

100

ST352

50

117619

50

x2

x6

AN960C10L NAS1149C0332 Purchased No



washer

D3391-021



Fwd Tube Assembly

D3391-023



Mid Tube Assembly

D3391-025



Aft Tube Assembly

Purchased No

110 Each 0.0000 44 44

1117291



(x44) u u l o w l o g

Manufactured No

110 Each 0.0000 1 1

(x1)



1369218 u u l o w l o g

Manufactured No

110 Each 0.0000 1 1

(x1)



1369223 u u l o w l o g

Manufactured No

110 Each 1.0000 1 1

(x1)



1369227 u u l o w l o g

Location

Loc Qty

Loc Code

FP

1

48122

1

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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NOTE: Date & initial all entries

Picklist Print

Thursday, May 05, 2011 11:51:15 AM

Work Order ID: 69243



Parent Item: D412-742-043



Parent Item Name: Replacement Float Skidtube

Start Date: 5/5/2011

Required Date: 5/9/2011

Start Qty: 1.00

Required Qty: 1.00

D3564-1 Manufactured No

110 Each

15.0000

1

1



Wearshoe



11/06/08

Location

Loc Qty

Loc Code

FG

2

33798

2

FP019

13

64747

13

D3564-3 Manufactured No

110 Each

12.0000

1

1



Wearshoe



11/06/08

Location

Loc Qty

Loc Code

FG

2

33764

2

1369290

11

FP019

10

62835

1

64748

5

66000

4

D3564-5 Manufactured No

110 Each

34.0000

1

1



Wearshoe



11/06/08

Location

Loc Qty

Loc Code

FG

2

34806

2

FP019

32

67588

12

68960

20

11

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Thursday, May 05, 2011 11:51:15 AM

Page 4

Work Order ID: 69243

Parent Item: D412-742-043

Parent Item Name: Replacement Float Skidtube

Start Date: 5/5/2011

Required Date: 5/9/2011

Start Qty: 1.00

Required Qty: 1.00

D3566-1

Manufactured No

110 Each

57.0000

2

2



Gasket



u106102

Location

Loc Qty

Loc Code

FP015

57

68344

18

68924

39

XZ

D3566-5

Manufactured No

110 Each

49.0000

1

1



Gasket



u106102

Location

Loc Qty

Loc Code

FP015

49

67589

16

68961

33

X1

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

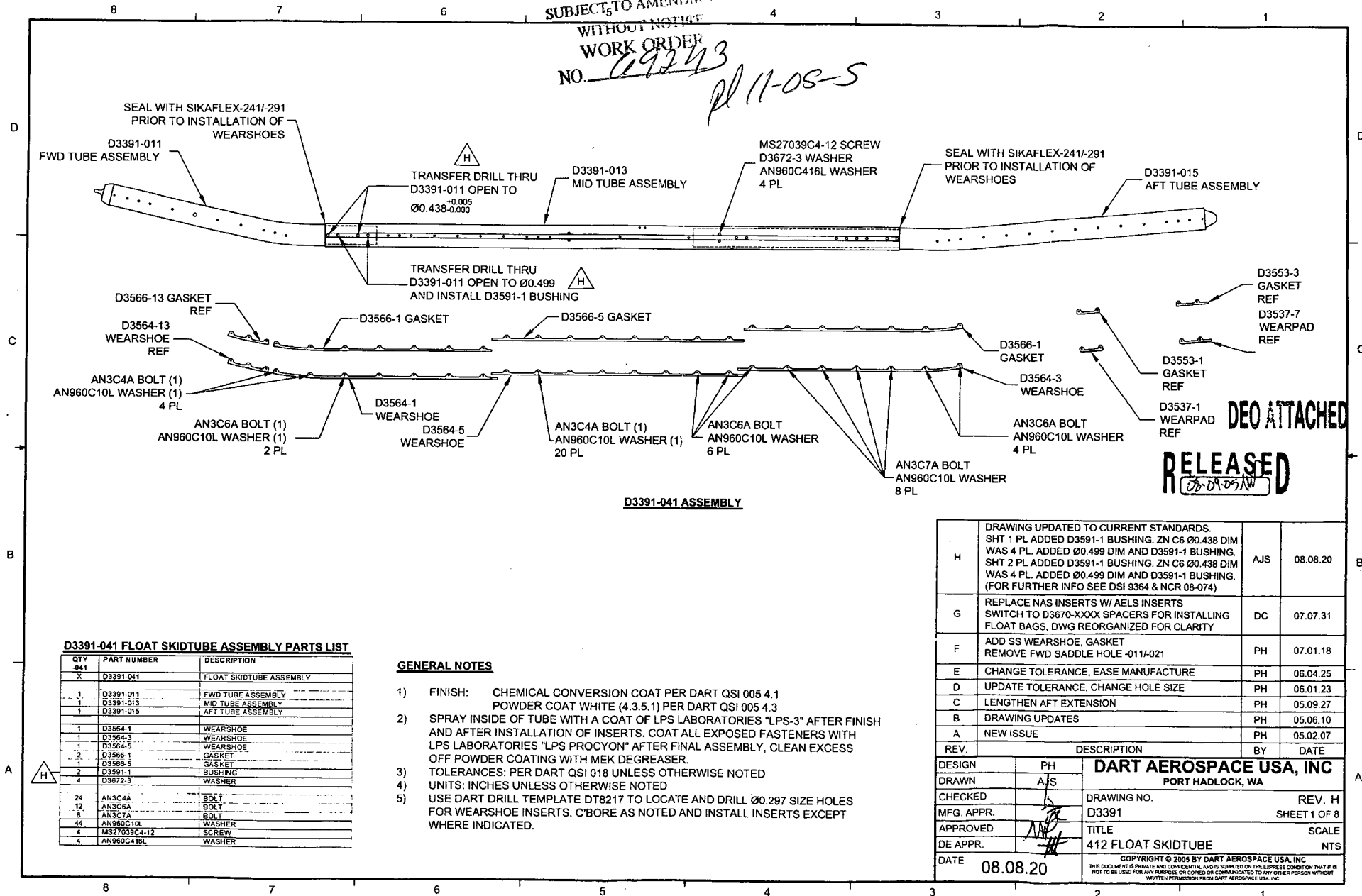
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT

WITHOUT NOTICE
WORK ORDER
NO. 09243
PL 11-08-5



| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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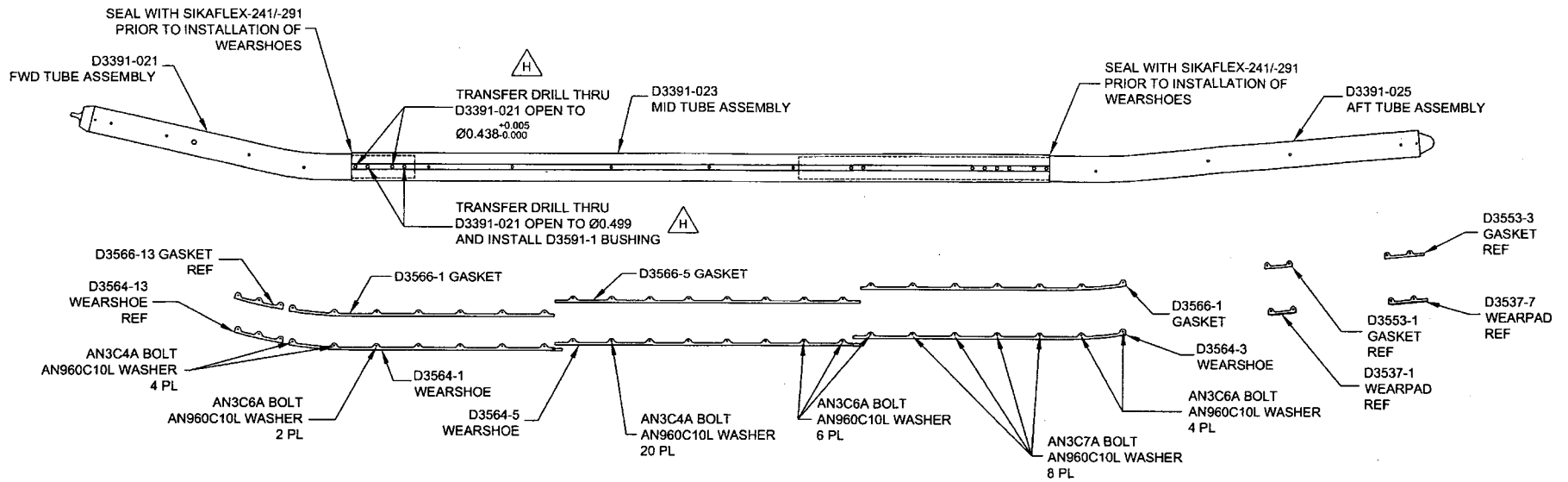
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

u/o 49243



D3391-043 ASSEMBLY

D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

| QTY | PART NUMBER | DESCRIPTION |
|-----|-------------|-------------------------|
| X | D3391-043 | Float Skidtube Assembly |
| 1 | D3391-021 | FWD TUBE ASSEMBLY |
| 1 | D3391-023 | MID TUBE ASSEMBLY |
| 1 | D3391-025 | AFT TUBE ASSEMBLY |
| 1 | D3564-1 | WEARSHOE |
| 1 | D3564-3 | WEARSHOE |
| 1 | D3564-5 | WEARSHOE |
| 2 | D3566-1 | GASKET |
| 1 | D3566-5 | GASKET |
| 2 | D3591-1 | BUSHING |
| 24 | AN3C4A | BOLT |
| 12 | AN3C6A | BOLT |
| 8 | AN3C7A | BOLT |
| 44 | AN960C10L | WASHER |

GENERAL NOTES

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.

DEO ATTACHED
RELEASED
08-09-25

| | | | |
|------------|----------|--|--------------|
| DESIGN | PH | DART AEROSPACE USA, INC | |
| DRAWN | AJS | PORT HADLOCK, WA | |
| CHECKED | | DRAWING NO. | REV. H |
| MFG. APPR. | | D3391 | SHEET 2 OF 8 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | 412 FLOAT SKIDTUBE | NTS |
| DATE | 08.08.20 | <small>COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small> | |

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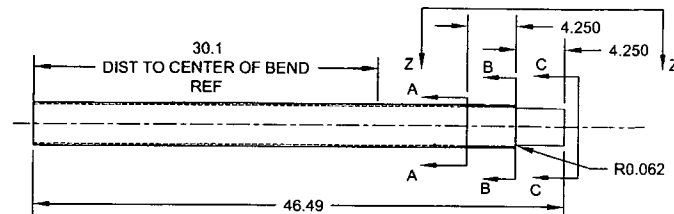
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

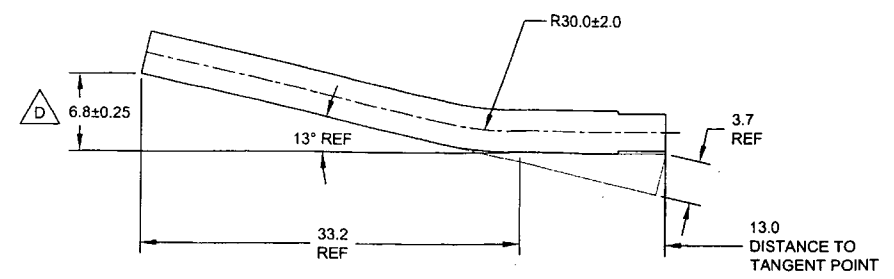
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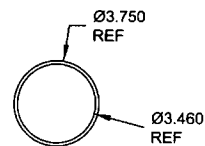
u1069243



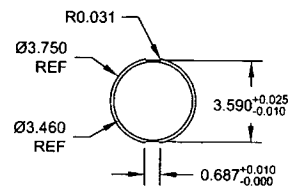
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



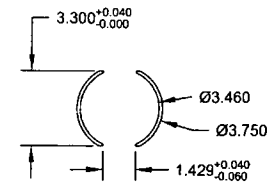
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



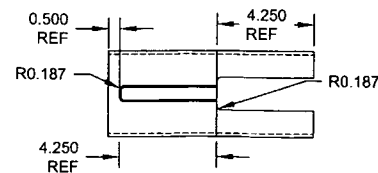
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X



SECTION C-C
SCALE 2X



VIEW Z-Z
SCALE 2X

DEO ATTACHED
RELEASED
08-05-11

| | | | |
|------------|----------|--|--------------|
| DESIGN | PH | DART AEROSPACE USA, INC | |
| DRAWN | AUS | PORT HADLOCK, WA | |
| CHECKED | | DRAWING NO. | REV. H |
| MFG. APPR. | | D3391 | SHEET 3 OF 8 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | 412 FLOAT SKIDTUBE | NTS |
| DATE | 08.08.20 | <small>COPYRIGHT © 2005 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS COVENANT THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small> | |

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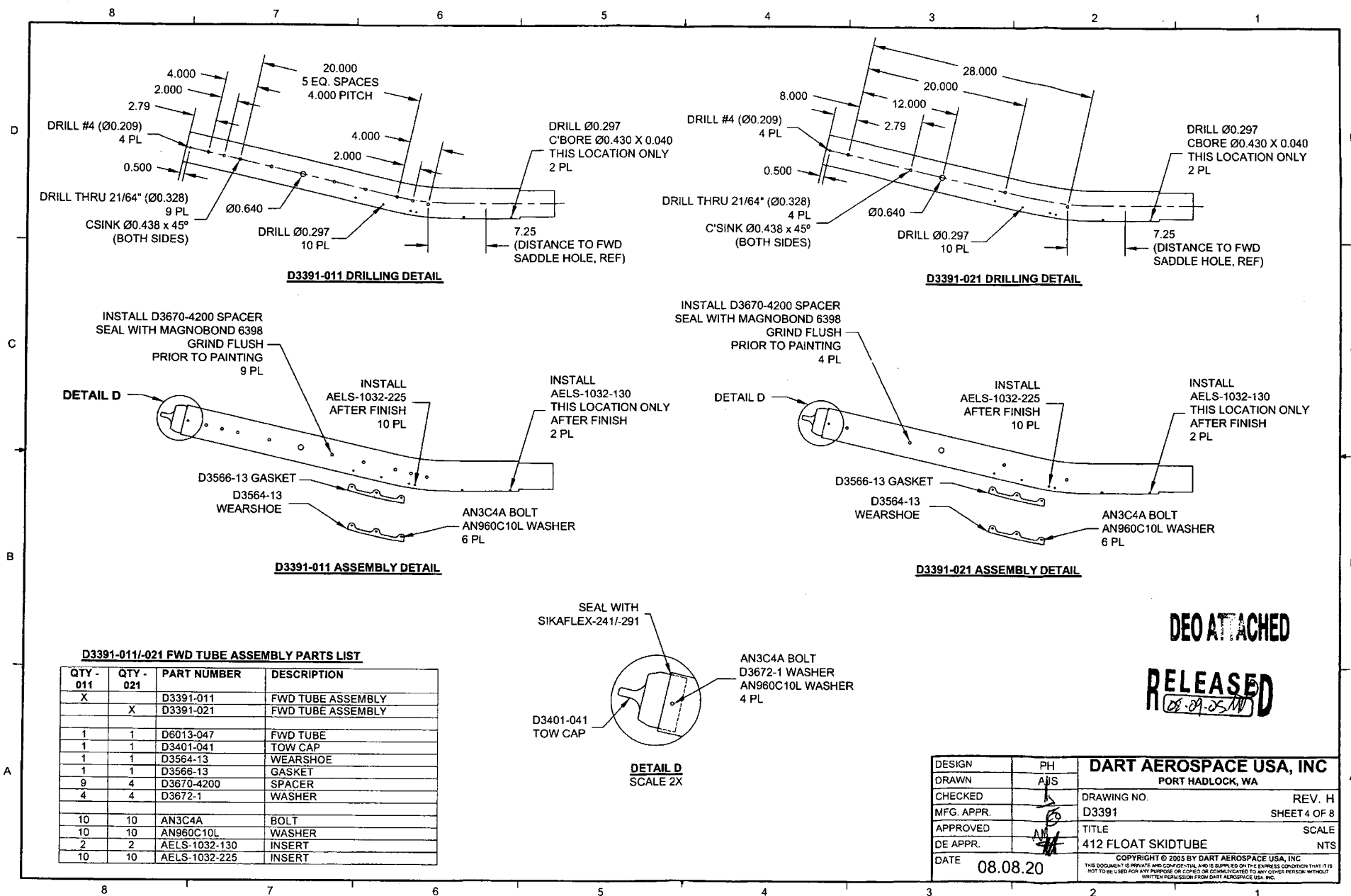
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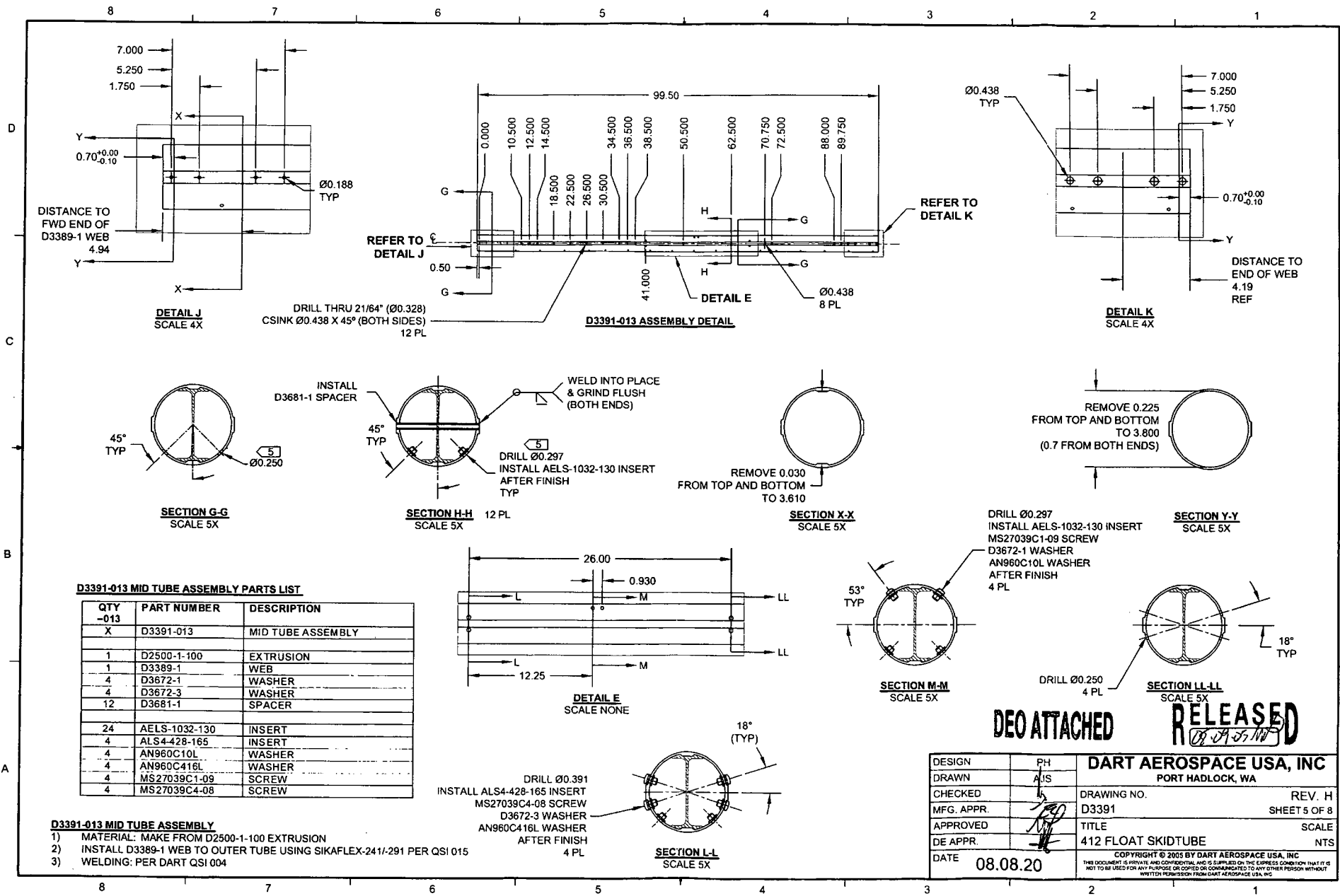
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

w/o 69243



| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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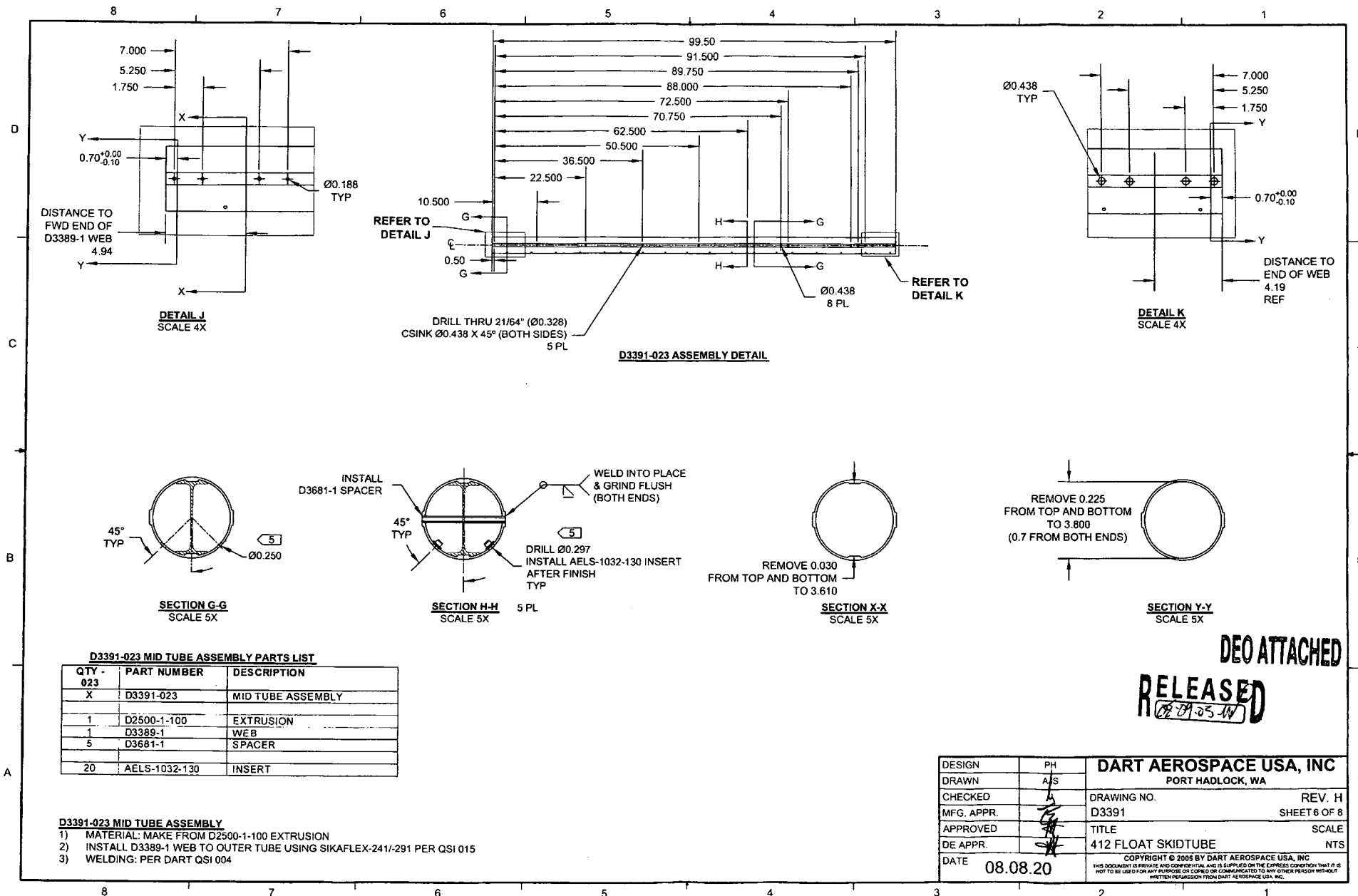
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NOTE: Date & initial all entries

u/b 69243



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08-08-20

| W/O: | | WORK ORDER CHANGES | | | | | |
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| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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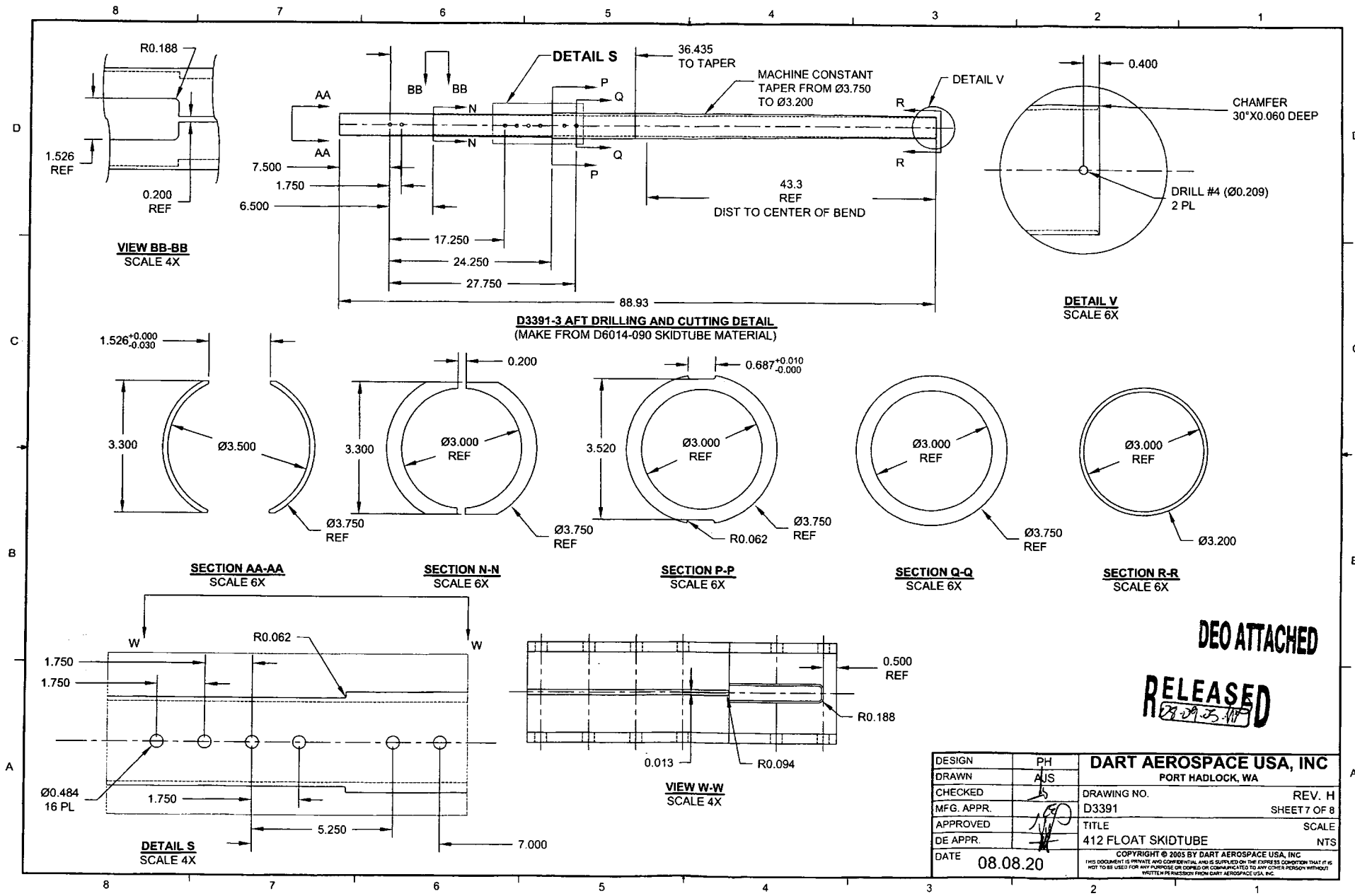
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NOTE: Date & initial all entries

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| DESIGN | PH | DART AEROSPACE USA, INC | |
| DRAWN | AJS | PORT HADLOCK, WA | |
| CHECKED | | DRAWING NO. | REV. H |
| MFG. APPR. | | D3391 | SHEET 7 OF 8 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | 412 FLOAT SKIDTUBE | NTS |
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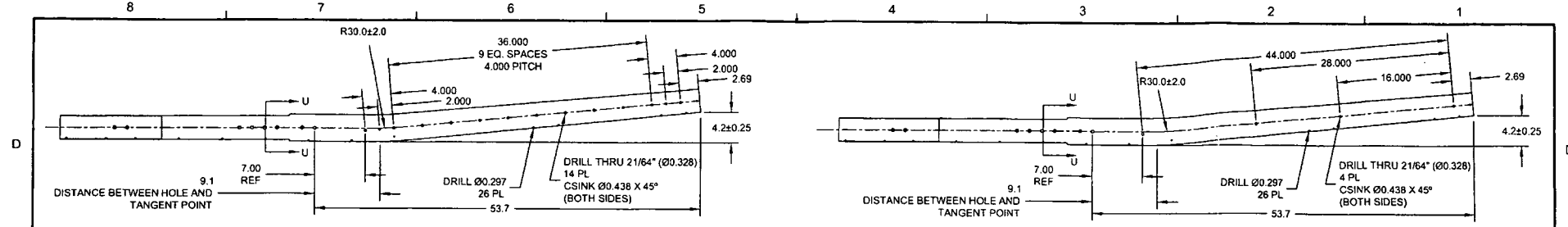
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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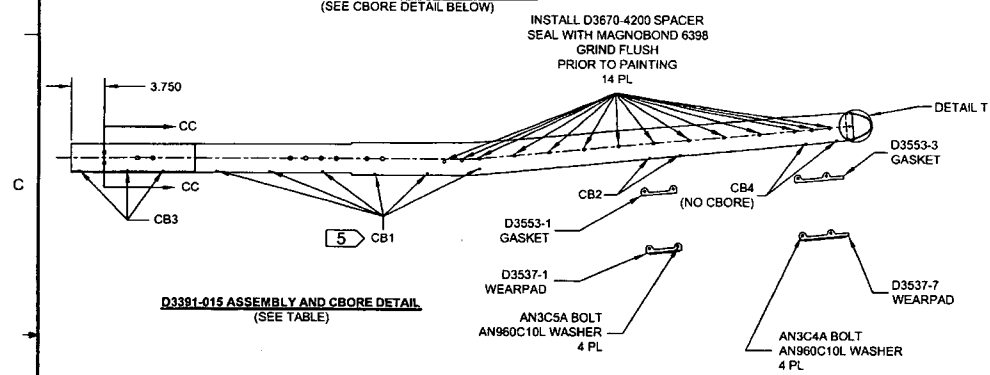
NOTE: Date & initial all entries

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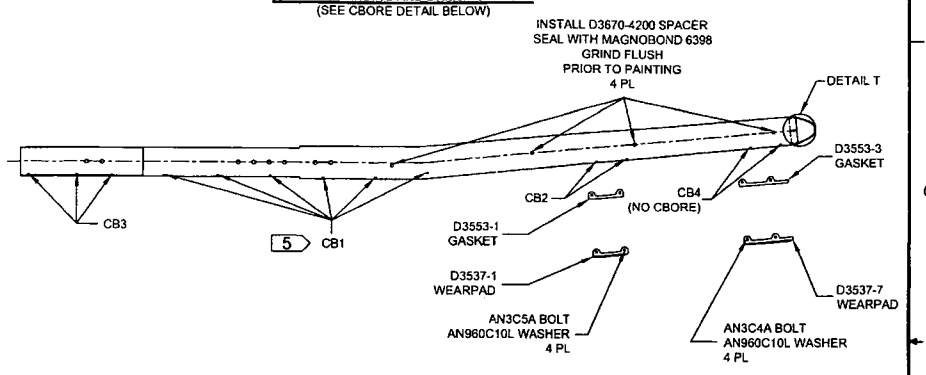


D3391-015 BENDING AND DRILLING DETAIL
(SEE CBORE DETAIL BELOW)

D3391-025 BENDING AND DRILLING DETAIL
(SEE CBORE DETAIL BELOW)



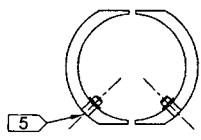
D3391-015 ASSEMBLY AND CBORE DETAIL
(SEE TABLE)



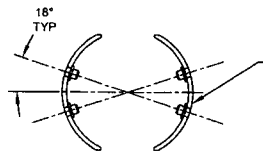
D3391-025 ASSEMBLY AND CBORE DETAIL
(SEE TABLE)

D3391-015-025 AFT TUBE ASSEMBLY PARTS LIST

| QTY - 015 | QTY - 025 | PART NUMBER | DESCRIPTION |
|-----------|-----------|---------------|-------------------|
| X | | D3391-015 | AFT TUBE ASSEMBLY |
| | X | D3391-025 | AFT TUBE ASSEMBLY |
| 1 | 1 | D6014-090 | AFT TUBE |
| 1 | 1 | D2646 | AFT CAP |
| 1 | 1 | D3537-1 | WEARPAD |
| 1 | 1 | D3537-7 | WEARPAD |
| 1 | 1 | D3553-1 | GASKET |
| 1 | 1 | D3553-3 | GASKET |
| 14 | 4 | D3670-4200 | SPACER |
| 2 | 2 | D3672-1 | WASHER |
| 14 | 14 | AELS-1032-130 | INSERT |
| 12 | 12 | AELS-1032-225 | INSERT |
| 4 | | ALS4-428-165 | INSERT |
| 6 | 6 | AN3C4A | BOLT |
| 4 | 4 | AN3C5A | BOLT |
| 10 | 10 | AN960C10L | WASHER |

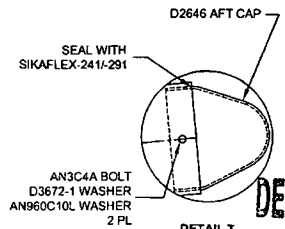


SECTION U-U
SCALE 3X



SECTION CC-CC
SCALE 3X

DRILL Ø0.391
CBORE Ø0.516 X 0.040 DEEP
INSTALL ALS4-428-165 INSERT
4 PL



DETAIL T
SCALE 4X

CBORE HOLES MARKED CB1-CB4 AS FOLLOWS AND
INSTALL AELS-1032-XXX AFTER FINISH AS NOTED

| HOLES MARKED | QTY | D3391-015 | D3391-025 | CBORE | P/N |
|--------------|-----|-----------|-----------|----------------|---------------|
| CB1 | 12 | | | Ø0.430 X 0.170 | AELS-1032-225 |
| CB2 | 4 | | | Ø0.430 X 0.170 | AELS-1032-130 |
| CB3 | 6 | | | Ø0.430 X 0.040 | AELS-1032-130 |
| CB4 | 4 | | | NONE | AELS-1032-130 |

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| DESIGN | PH | DART AEROSPACE USA, INC | |
| DRAWN | AJS | PORT HADLOCK, WA | |
| CHECKED | h | DRAWING NO. | REV. H |
| MFG. APPR. | B | D3391 | SHEET 8 OF 8 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | 412 FLOAT SKIDTUBE | NTS |
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DEO ATTACHED
RELEASED
08.09.05.14

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

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|----------------------|-----------------------------|---------------------|--|--------------------|-------------------------|---------------------------|--------------|
| DRAWING NO. D3391 | TITLE 412 FLOAT SKIDTUBE | REV. H | DART AEROSPACE USA, INC ENGINEERING ORDER | | D.E.O. NO. D3391-H-1 | SHEET NO. SHEET 1 OF 1 | SCALE NTS |
| DRAWN <i>CP</i> | CHECKED <i>1</i> | MFG. APPR. <i>M</i> | APPROVED <i>MP</i> | DE APPR. <i>MP</i> | | | |
| DATE 09.09.23 | DATE 04.09.24 | DATE 09/09/25 | DATE 09/09/30 | DATE 09/09/30 | | | |

PURPOSE:

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF D3391-041/-043 SKIDTUBES.

CHANGE:

AMEND NOTE 2 OF D3391-041/-043 SKIDTUBE ASSEMBLIES (ZN A6-1, A6-2) AS FOLLOWS:

- 2) ~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH~~
~~AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH~~
 LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS
 OFF POWDER COATING WITH MEK DEGREASER.

RELEASED
 2010-02-02

MP

U/069243

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